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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Martin E. Lee

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

RO, BENTSU

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,859

Applicant(s)

LEE, MARTIN E.

Examiner

Bentsu Ro

Art Unit

2837

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) that are all pending is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/2/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

Continuation of Disposition of Claims: Claims pending in the application are 34-44,47-50,52-78,80-83,87-104,106-113,116,117,120-123,130-133,135-138,140-143,146,147,150-154 and 157-171.

SECOND OFFICE ACTION --- A FINAL REJECTION

1. First group claims (34-41, 44, 52, 56, 59, 63, 66, 67, 70, 71); second group claims (72-78, 80, 81, 91, 92, 96, 99, 100, 102, 103); third group claims (104, 106, 109, 110, 112, 116, 130, 131, 132); fourth group claims (133, 135, 138, 140, 142, 146, 154) are all rejected under 35 U.S.C. 102(b) as being clearly anticipated by Reeds US Patent No. 4,891,526.

The examiner maintains the same rejection as that of the first office action.

Applicant is therefore referred to the first office action paragraph 1 for the details.

In response to the first office action, applicant has amended independent claims 34, 72, 104 and 133 by adding a single word "mechanically" to further clarify the non-mechanical contact between the second portion of the drive and the movable stage.

In the first office action, the examiner has defined in claim 34: *a drive as the y-drive motor 36 and the associated elements (not shown in Fig. 7); a first portion as a y-drive bar 50 (see Fig. 3); a movable stage as the x-y stage plate 12; a second portion as the y-drive motor 36.*

Reeds Fig. 3 clearly shows that the second portion of the drive (the y-drive motor 36) is not contacting the movable stage (the x-y stage plate 12) mechanically. Thus the amendment does not overcome the rejection.

Applicant's arguments have been fully considered, but they are not convincing. Applicant has called the examiner's attention to Reeds column 6, lines 28-42 for the drive motors 36 and 61 mechanically contact the x-y stage plate 12.

A careful study of column 6, lines 28-42, one can see that these lines does not state whatsoever the contact between the drive motor 36 and 61 to the x-y stage plate 12. Instead, these lines state the coupling of the motor to the x-y stage via the rack gear of the drive bar, meshing pinion gear, drive capstan, etc. There is absolutely no statement of the direct mechanical contact between the drive motor and the x-y stage plate.

2. First group claims (34-44, 47-50, 52-56, 59-62, 71); second group claims (72-78, 80-83, 87-96, 99, 100, 102, 103); third group claims (104, 106, 109, 110, 112, 116, 117, 120-123, 130-132); fourth group claims (133, 135, 138, 146, 147, 150-154, 157) are all rejected under 35 U.S.C. 102(e) as being clearly anticipated by Itoh et al US Patent No. 5,260,580.

With respect to these claims, the examiner maintains the same rejection as that of the first office action, paragraph 2. Applicant should refer to the first office action paragraph 2 for the details.

Applicant argues that Itoh does not indicate where the laser distance measuring device 51 is mounted. In particular, in Itoh Fig. 1 (or other figures), the element 51 is not attached to the base 1.

This argument is not convincing. First, Itoh does not show everything in Fig. 1. This does not mean that there is no attachment of the device 51 to the base 1. The stationary base 1 shown in Fig. 1 is merely a symbolic structure. In fact, Itoh does not show many things in Fig. 1, this does not mean that these "many things" are non-

existent. For example, Itoh does not show any supporting bracket between device 51 and base 1 does not mean that the device 51 is suspended in the air. Itoh also does not show AC plug, the connecting wire, the light bulb, the light sensor, the ground floor, etc. This does not mean that there is no AC plug, no connecting wire, no light bulb, no light sensor, no ground floor, etc.

The most important thing to remember is that the movement is measured relatively between the stationary base 1 and movable stage 2. In order to measure this movement (or distance of movement), the mirror 52 must be placed on the stage 2 and the laser device 51 must be placed on the base 1, or otherwise, the functionality of the measurement would not be achievable.

3. Claims 57, 58, 97, 98, 107, 108, 136, 137 are all rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al.

The examiner maintains the same rejection as the first office action, paragraph 3. Applicant is referred to the first office action, paragraph 3 for the details of the rejection.

4. Claims 64, 68, 101, 111, 113, 141, 143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reeds (Patent No. 4,891,526) as applied to claims 34, 63, 67, 72, 104, 110, 112, 133, 140, 142 above, and further in view of Phillips US Patent No. 4,585,337. (The Phillips reference is a new reference.)

Regarding these claims, Reeds does not teach a yaw control. However, a yaw control is taught by Phillips.

In view of Phillips teaching, it would have been obvious to a skilled person in the art to add a yaw control to Reeds system to achieve the same subject matter as claimed. Then why???

Adding a yaw control will increase the versatility of the system. Without yaw control, the movement of the stage is too rigid. Adding a yaw control increases the freedom of the movement, thus increases the versatility of the system. Because yaw control has at least one such advantage, it would have been obvious to add such a yaw control to the Reeds system to increase the versatility of the system.

5. Claims 63, 65, 67, 69 are all rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh's 5,260,580 as applied to claim 34 above, and further in view of Reeds 4,891,526, or vice versa.

With respect to these claims, the examiner maintains the same rejection as the first office action, paragraph 5. Applicant is referred to the first office action, paragraph 5 for the details of the rejection.

6. Claims 158-171 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al US Patent No. 5,260,580.

OR ALTERNATIVELY

Claims 158-171 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al US Patent No. 5,260,580 in view of Franken et al US Patent No. 5,150,153.

With respect to these claims, the examiner maintains the same rejection as the first office action, paragraph 6. Applicant is referred to the first office action, paragraph 6 for the details of the rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number (571) 272-2072.


Bentsu Ro
Senior Examiner
Art Unit 2837